Does Kangaroo Mother Care have an impact on breastfeeding or oral feeding readiness measures in preterm infants?

Samantha Lebold, Morgan McGowan, Kalie Mitchell

Division of Speech and Hearing Sciences, The University of North Carolina at Chapel Hill

Background

Kangaroo Mother Care (KMC) was first established in Bogotá, Colombia as a cost-effective alternative to traditional incubation in under-resourced facilities (Rey & Martinez, 1983). In KMC positioning, an infant wearing only a diaper is placed between the mother’s breasts in an upright position, creating skin-to-skin contact (SSC) between the mother and infant. Rey and Martinez (1983) promote early implementation of KMC in a continuous and prolonged manner where possible. In addition to being a cost-effective and easy to administer alternative, there is research to support the efficacy of KMC for other outcomes including improved mortality, infection, and sepsis in preterm infants (Conde-Agudelo, 2016). KMC has also been shown to significantly improve thermoregulation abilities and shorten hospital stays (Chapar et al., 1997). There is an increasing body of research on feeding measures regarding KMC’s impact on feeding readiness in preterm infants. The purpose of our study was to investigate and systematically review the existing literature concerning the outcomes of Kangaroo Mother Care (KMC), or skin-to-skin contact (SSC) on breastfeeding or oral feeding readiness in preterm infants.

PIQ Question

In preterm infants, how does Kangaroo Mother Care, or skin-to-skin contact, influence breastfeeding, or oral feeding, readiness?

Methods

Databases Searched
- PubMed, ProQuest, CINAHL

Inclusion Criteria
- Studies with a preterm population, oral feeding outcomes, and KMC or SSC as the primary intervention technique
- Studies must be peer reviewed and in English
- Studies reporting on original research

Exclusion Criteria
- Case or descriptive study designs
- Time Limiting none

Search terms
- “Skin-to-skin” OR “Kangaroo Care” OR “Kangaroo Mother Care” OR SSC
- (Preterm OR Premature*)
- (Infant OR Baby OR Babies OR neonate*)
- (Breastfeed* OR “Oral feed*”)

Reliability
- Title and Abstract Screen: 84%
- Full text review: 100%
- Quality Appraisals: 93%

Database searches were performed in June 2021.

Conclusions

Due to the significant variation among critical aspects of the included studies there is insufficient evidence to support or refute the use of KMC to improve oral feeding readiness in preterm infants.

• Definitions of preterm infants included gestational age of 32 to 37 weeks, birth weight ranging from 1300 to 1800 grams, or simply the infant’s presence in the NICU.

• Amount of KMC infants received ranged from 90 minutes to over 19 hours per day.

• Wide range of breastfeeding outcomes.

• While KMC cannot be proven to be beneficial, clinicians can be confident that it is not harmful to preterm infants.

• KMC is cost effective, easy to implement, and has other positive outcomes suggesting that it could be an effective intervention tool for preterm infants that are medically stable, particularly those in more rural and under-resourced areas.

Future Research

• Further research is needed in order to draw a reliable conclusion about the effects of KMC on oral feeding readiness in the preterm population.

• Future research efforts should focus on establishing and adhering to more consistent definitions of KMC, breastfeeding outcomes, and preterm infants, in order to make a more confident claim about the efficacy of KMC as an intervention for feeding outcomes.

• Going forward, studies that find statistical significance among outcomes should calculate the effect size in order to understand the clinical significance of KMC on breastfeeding outcomes.

References available upon request: morgan_mcgowan@med.unc.edu, kalie_mitchell@med.unc.edu, samantha_lebold@med.unc.edu

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Tables

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<th>Study Design</th>
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Summary of Articles

- Kangaroo - 9 studies reported on breastfeeding as the result of KMC intervention.
- Successful breastfeeding defined as partial or exclusive oral feeding at the breast, often determined by a lactation consultant, nurse, physician, or other medical professional.

Breastfeeding Exclusivity
- 7 studies reported on exclusive breastfeeding as the result of KMC intervention.
- 1 study (86%) of studies found that KMC or SSC had a statistically significant impact on whether or not the preterm infant exclusively breastfed at a variety of time points after discharge from the NICU.

Breastfeeding Duration
- 5 studies reported on duration of breastfeeding as the result of KMC intervention.
- 2 studies (50%) of studies found that KMC had a statistically significant impact on the duration the preterm infant will engage in oral feeding at the breast after discharge from hospital.

Results

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Conclusion

- Study: Kangaroo Mother Care has a statistically significant impact on breastfeeding and oral feeding readiness measures in preterm infants. Further research is needed to draw a reliable conclusion about the effects of KMC on oral feeding readiness in the preterm population.